

1 What is claimed is:

2  
3 1. A filter case coupling assembly comprising:  
4 at least one coupling protrusion formed at a filter case having a noise filter inside; and  
5 at least one guide rail formed at a plate to guide the coupling protrusion to slide to be  
6 inserted therein wherein the filter case is mounted on the plate.

7  
8 2. The filter case as claimed in claim 1, wherein the coupling protrusion  
9 protrudes in a lateral direction from a lower edge of each side of the filter case.

10  
11 3. The filter case as claimed in claim 1, the coupling protrusion comprising:  
12 a body protruding downward from a bottom of the filter case; and  
13 guide protrusions protruding in a lateral direction from lower edges of both sides of  
14 the body, respectively.

15  
16 4. The filter case as claimed in claim 1, wherein a front side of the guide rail is  
17 blocked so that the coupling protrusion inserted as long as a predetermined distance is unable  
18 to move ahead.

19  
20 5. A washing machine comprising:  
21 a tub to hold water;  
22 a drum rotatably installed in the tub to hold laundry;  
23 a cabinet having the tub and drum inside;  
24 a control panel coupled to the cabinet to have a control unit inside;

25 a filter case having a noise filter inside, the noise filter preventing the control signals  
26 carried on the wires 80 from interfering with other signals or from attenuating; and

27 a filter case coupling assembly sliding on the cabinet and coupling the filter case to  
28 the cabinet.

29  
30 6. The washing machine as claimed in claim 5, wherein the filter case is  
31 coupled to a top plate forming a topside of the cabinet.

32  
33 7. The washing machine as claimed in claim 6, wherein the filter case is  
34 coupled to an upper surface of the top plate.

35  
36 8. The washing machine as claimed in claim 7, the filter case coupling  
37 assembly comprising:

38 a pair of coupling protrusions protruding in a lateral direction from lower edges of  
39 both sides of the filter case, respectively; and

40 a pair of guide rails formed at the top plate to guide the coupling protrusions to slide  
41 to be inserted therein for coupling.

42  
43 9. The washing machine as claimed in claim 7, the filter case coupling  
44 assembly comprising:

45 at least one coupling protrusion protruding from a bottom of the filter case; and

46 at least one guide rail formed at the top plate to guide the coupling protrusion to slide  
47 to be inserted therein for coupling.

49           10.     The washing machine as claimed in claim 9, the coupling protrusion  
50 comprising:

51                 a body protruding downward from the bottom of the filter case; and  
52                 a pair of guide protrusions protruding in a lateral direction from lower edges of both  
53 sides of the body, respectively.

54  
55           11.     The washing machine as claimed in claim 8, wherein a front side of the guide  
56 rail is blocked so that the coupling protrusion inserted as long as a predetermined distance is  
57 unable to move ahead.

58  
59           12.     The washing machine as claimed in claim 9, wherein a front side of the guide  
60 rail is blocked so that the coupling protrusion inserted as long as a predetermined distance is  
61 unable to move ahead.

62  
63           13.     The washing machine as claimed in claim 7, wherein the control panel is  
64 coupled to rear parts of the upper surface of the top plate.

65  
66           14.     The washing machine as claimed in claim 13, wherein the filter case is  
67 provided under the control panel.